General

Guideline Title

HealthPartners Dental Group and Clinics guidelines for the diagnosis & treatment of periodontal diseases.

Bibliographic Source(s)

HealthPartners Dental Group and Clinics guidelines for the diagnosis and treatment of periodontal diseases. Minneapolis (MN): HealthPartners Dental Group; 2011 Dec 9. 37 p. [51 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: HealthPartners Dental Group and Clinics guidelines for the diagnosis and treatment of periodontal diseases. Minneapolis (MN): HealthPartners; 2006 Mar 9. 85 p.

Recommendations

Major Recommendations

Comprehensive Periodontal Examination and Diagnosis

The topics covered in this section are presented in greater detail in the National Guideline Clearinghouse summary of the HealthPartners Dental Group and Clinics Periodontal Risk Assessment Guideline.

Comprehensive Periodontal Assessment

A comprehensive periodontal assessment is performed by the dentist, dentist and hygienist in cooperation, or initially by the hygienist under a collaborative agreement, with dentist review. Complete periodontal records and a recent radiographic series are required. A comprehensive periodontal exam is essential to establish a diagnosis and treatment plan prior to active periodontal therapy. After therapy and on regular intervals an assessment must be repeated to ensure that periodontal therapy has had the desired effect, to recommend further active therapy, referral or, if disease is controlled, a maintenance recall interval.

Elements of Periodontal Assessment

- Radiographs
  - Current radiographs (within 6 months in active disease, two years in maintenance, showing *at least 3 mm* of crestal bone with proper angulation)
  - A full mouth series, less than two years old is indicated; if periodontitis is isolated to specific teeth, periapicals of those teeth, with

current bite wings and a panographic radiograph are acceptable.
    - A series of seven bite wing radiographs (four posterior vertical radiographs and three anterior bite wings) including 3 mm of crestal bone may be acceptable, especially for a patient in maintenance.
- Visual exam of tissues
    - Tissue tone (edematous, hyperplastic)
    - Color (erythema)
- Plaque and calculus assessment
    - Plaque level described in the record
    - Calculus amount (light, heavy, moderate)
- Periodontal charting
    - Attachment loss
    - Pocketing
    - Furcation (score 1 = detectible concavity; 2 = a detectable roof to the area between the roots; 3 = a detectable through and through defect)
    - Bleeding and suppuration
    - Mobility (score 1 is mobility that is slightly greater than normal; 2 represents approximately 1 mm of mobility; 3 is greater than 1 mm of mobility or depressible apically)
    - Mucogingival relationships; dated photographic images will be a valuable adjunct in the assessment of stability of mucogingival problems over time.

Diagnosis of Gingivitis

Plaque-induced gingivitis is defined as inflammation of the gingiva in the absence of clinical attachment loss. Plaque associated gingivitis is the most common periodontal disorder. Diagnosis of gingivitis is based on the signs of inflammation. In clinical practice identification of the signs of inflammation without clinical or radiographic evidence of attachment loss establishes the diagnosis. The most common signs of inflammation include redness, gingival bleeding with manipulation, and tissue edema.

Numerous systemic factors including hormonal changes associated with adolescence and pregnancy, mouth breathing, medications, and immune status can precipitate or intensify gingivitis. In these cases removal of the local factors of plaque, calculus, and iatrogenic dentistry can be expected to improve the clinical status of the patient.

Diagnosis of Chronic Periodontal Disease

Periodontitis is defined as inflammation of the gingiva extending into the adjacent attachment apparatus. The disease is characterized by loss of clinical attachment due to destruction of the periodontal ligament and loss of the adjacent supporting bone. Diagnosis is generally based on two criteria: evidence of active disease process through the signs of inflammation, and documentation of attachment loss. Pocket measurements, including attachment level, and well angulated radiographs establish the loss of attachment. In clinical practice maintenance of good records is essential, as they will show whether the patient is stable or suffering progression.

Classification of Periodontal Disease

The American Dental Association classifications are used in the insurance industry for third party payment. They provide an indication of previous attachment loss, but not a useful index of current disease activity.

A more useful scheme for classification provides for the division of plaque related periodontal diseases by the degree that the attachment is compromised in the presence of the signs of inflammation that may indicate active attachment loss. When the modifiers of local versus generalized are applied to the descriptor for the level of attachment loss (gingivitis, and mild, moderate, and severe periodontitis) the periodontal condition can be described.

- Characteristics of periodontitis with slight loss of attachment in affected teeth
    - Indications of active disease (edema, erythema, bleeding on probing, or suppuration)
    - Mobility may be present.
    - If molar teeth are involved class I furcation involvement may be present.
    - Radiographic bone loss is apparent.
    - Attachment loss of 2-3 mm
    - Pocket depth of 4-5 mm
    - Age 35 years of age or older (inflammation and attachment loss in younger individuals is likely some other condition; possibly aggressive periodontal disease, or a primary systemic problem)

- Characteristics of periodontitis with moderate loss of attachment in affected teeth
    - Indications of active disease (edema, erythema, bleeding on probing, or suppuration)
    - Mobility may be present
    - Loss of up to one third of the attachment level
    - If molar teeth are involved furcation involvement should not exceed class two
    - Radiographic bone loss will be apparent
    - Attachment loss of 5 mm or greater
    - Pocket depth of 5 mm or greater
    - Age 35 years of age or older (inflammation and attachment loss in younger individuals is likely some other condition; possibly aggressive periodontal disease, or a primary systemic problem)
- Characteristics of periodontitis with advanced loss of attachment in affected teeth include those of moderate periodontal disorders plus:
    - Loss of more than one third of the attachment level
    - If molar teeth are involved greater than class I furcation involvement can be expected
    - Radiographic bone loss will be apparent
    - Attachment loss of more than 5 mm
    - Pocket depth of greater than 6 mm
    - Mobility that cannot be related to occlusal loading

<u>Gingivitis and Periodontal Disease</u>

Initial Therapy and Supportive Treatment

Plaque Related Periodontal Disease

1. Signs of gingivitis or periodontitis
    - Periodontal screening
        - Clinical signs of active disease (erythema, edema, bleeding, or suppuration on probing)
        - Clinical or radiographic indication of attachment loss in individuals less than age 35 is likely some other condition; possibly aggressive periodontal disease, or a primary systemic problem

2. Initial preparation to allow for an evaluation
    - Heavy calculus
        - When accretions prevent accurate probing initial preparation with an ultra-sonic scaler to remove ledges of supra and sub calculus is necessary
    - Dental condition
        - Caries may require temporary restoration prior to periodontal assessment
        - Hopeless teeth (bone loss to apex, cracked roots, unrestorable operatively) may interfere in a diagnosis, and may require removal prior to a complete assessment
        - Restorations with large overhangs may need to be replaced to allow for a complete periodontal evaluation

Chronic Periodontitis

<u>Local Factors</u>

- Perio-endo relationships
    - Localized deep defects should be evaluated for possible perio-endo relationship.
    - Long standing endo defects become periodontal pockets, and require periodontal maintenance.
- Occlusion
    - Should be evaluated when mobility is identified
- Tooth morphology
    - Root concavities or grooves can result in severe localized periodontal defects.
    - Multi-rooted variants of non-molars introduce possible furcal invasion and reduce prognosis.
- Calculus
    - Provides both a physical irritant and a refuge for bacteria and bacterial toxins
    - Effective removal of calculus is important in altering the bacterial flora of the periodontal pocket.
- Contact relationships
    - Open contacts can subject the periodontal tissues to the direct irritation of food impaction.

- Defective restorations
  - Marginal openings are a refuge for bacteria.
  - Overhanging margins alter tissue contours, retain bacteria, and frustrate hygiene efforts.
- Tooth malposition
  - Tipped teeth can produce pseudo pocketing and intercom defects.
  - Root approximation hinders hygiene efficacy and can result in accelerated bone loss in the presence of inflammation.

Is an Adequate Response to Therapy Likely?

- Factors that increase the likelihood of resolution
  - Edematous tissues at initial examination
  - Horizontal (versus vertical) pattern of bone loss
  - Absence of furcal invasions and concave root surfaces
  - Indication of patient interest in treatment and improvement of oral health
- Factors that decrease the likelihood of resolution
  - Mucogingival problems
  - Infrabony defects
  - Furcation involvement
  - Heavy occlusal or restorative loading (bridge and partial abutments)
  - Hyperplastic tissues
  - Minimal calculus at initial instrumentation
  - Excellent oral hygiene at initial exam

Systemic Factors (covered more extensively in sections VII and VII in the original guideline document)

- Systemic medical conditions
  - Diabetes
  - Corticosteroid therapy
  - Chemotherapeutic agents
  - Hematological disorders
  - Tobacco habit
  - Drug abuse
  - Pregnancy and other endocrine factors
  - Medications that cause tissue hypertrophy

When Is Referral Appropriate

The treatment of the majority of patients with periodontal conditions should be in the scope of general dental practice. Conditions for which a referral is indicated include cases that do not respond to initial therapy, aggressive periodontitis, and mucogingival cases where surgery may be indicated, failing implants, and situations where the course of treatment is not clear.

Beyond those instances where a referral should be made, there are cases when a patient should be offered a referral. Patients with increasing pocket depths, patients with pockets exceeding 5 mm, patients with class 2 furcation involvement, and patients with mucogingival problems should be offered a referral to the periodontist. This referral offer should be documented in the record.

Scale and Root Plane

- Criteria
  - End point is to effect a change in the micro bacterial distribution within the pocket and surrounding tissue; not strictly calculus removal
- Treatment
  - Ultra-sonic instrumentation when combined with hand instrumentation provides improved instrumentation where access is poor (i.e., furcations, deep pockets, posterior teeth).
  - Usually requires local anesthesia

Evaluation for Response to Therapy

- Performed at 4-6 weeks after last quadrant treated
- Review oral hygiene

- Repeat periodontal probing for furcal invasions, attachment, and pocket depths
- Review mobility, bleeding, and suppuration
- Examine root surfaces for smoothness
- Remove residual calculus
- Expect resolution of 1-2 mm pocket depth
- Expect resolution of signs of active disease
- Clinical judgment is critical in determining whether treatment was successful

Compromise Therapy

Less than complete periodontal control may be unavoidable in some instances

- Advanced age
- Chronic illness
  - May contraindicate therapy
- Extremely poor prognosis
  - Individual teeth or the entire dentition may be severely compromised for periodontal or other reasons, where periodontal therapy is unlikely to change the outcome.
- Economic considerations may dictate compromise therapy.
  - Patients may not be able afford or chose not to pursue periodontal therapy because of the expense of treatment.
- Patient refuses specialist care
  - Patient must be informed of potential consequences including tooth loss.
  - Documentation must include treatment options presented to the patient, and that the patient made an informed decision to not comply with a recommended referral.
- Adjunctive therapy
  - Use of systemic or topical medications in a general dental practice, without conventional therapy is a compromise treatment.
  - There is evidence that use of nonsteroidal anti-inflammatories can slow bone loss in periodontitis.
  - Antibiotics, especially metronidazole/amoxicillin and doxycycline, have been shown to change bacterial flora and slow the progression of attachment loss.
  - Irrigation may serve as an adjunctive therapy in pockets that are not accessible to conventional oral hygiene devices.
  - Localized antibiotic therapy has been shown to temporarily reduce pocketing and increase attachment levels.
- For economic or other reasons a patient may refuse the recommended therapy, but agree to a routine prophylaxis appointment document.
  - Patient's understanding of periodontal condition, treatment recommendation, and likely outcome of noncompliance
  - Problem areas that were addressed and to what extent
  - Those areas that were not addressed
  - Plan for next visit
- Treatment plan
  - Emphasis should be place on those teeth that treatment will likely make a difference.
  - Teeth without evidence of active periodontitis are of low priority for treatment.
  - Visits may emphasize sides, quadrants, or individual teeth.

Adjunctive Therapies

Systemic Antibiotics

Many clinical studies have investigated the efficacy of treating periodontal diseases with systemic antibiotics. A review of the literature demonstrates inconsistent results due to many factors, among them the variety of study designs, assessment of disease activity, and combination with other forms of therapy. Clinical studies do not support the use of systemically administered antibiotics in uncomplicated chronic periodontitis, but do support their use in selected and specific periodontal diseases.

In chronic periodontitis, those patients that present with moderate to advanced disease with extensive swelling and bleeding, antibiotic treatment coincident with initial therapy may improve results. A course of amoxicillin and metronidazole for seven days is the preferred treatment, with azithromycin or clindamycin as alternatives for patients with amoxicillin allergy.

Patients with a mixed response to initial therapy, with continued evidence of inflammation with periodontal maintenance may benefit from antibiotic therapy. Doxycycline has been shown to reduce the activity of periodontitis for up to seven months when used in conjunction with scaling and root planing. The usual dosage is doxycycline 200 mg first day 100 mg daily for 14-21 days.

Antibiotic therapy is indicated in refractory periodontitis. Amoxicillin and metronidazole for seven days, with azithromycin or clindamycin as alternatives for patients with amoxicillin allergy.

For periodontal abscess antibiotics may be indicated in conjunction with mechanical instrumentation. Amoxicillin for seven days is the preferred treatment, with azithromycin or clindamycin as alternatives for patients with amoxicillin allergy.

Local Antibiotics

Atridox (doxycycline hyclate gel) is currently used in HealthPartners Dental Group clinics. Atridox helps in reducing bacterial levels, clinical parameters of inflammation and pocket depths through epithelial and connective tissue reattachment. No osseous regeneration should be anticipated with these means. It should be noted that if a patient does not respond to root planing with adjunctive local antimicrobial delivery, it may be advisable to consider specific bacterial identification.

Periodontal diseases are induced by a number of microorganisms, most of which are anaerobic. These anaerobes are usually suppressed by root debridement; however, microbial control may not be achieved in deep pockets, furcations, or if there is bacterial invasion of the tissues. Documentation that the patient is actually losing attachment is critical to establishing that the patient has destructive periodontal disease and needs intervention.

Anti-microbial Rinses

Chlorhexidine has been shown to be effective in reducing gingivitis. It is staining and may alter taste sensation.

Chlorhexidine 0.12% (Peridex®) 5 oz. rinse twice daily.

Listerine® has been shown to be effective in reducing gingivitis. It does not have the degree of effectiveness that is shown by Chlorhexidine, but also does not stain as much, or alter taste sensation.

Less Common Periodontal Disorders

Non-plaque Related Gingivitis

A number of forms of gingivitis are found in association with other diseases or conditions. Desquamative gingivitis is characterized by sloughing of the gingival epithelium, leaving a red gingival surface. Estimates are that more than 90% of these cases are a manifestation of pemphigoid and erosive lichen planus. Allergies and other dermatological disorders have been associated with this form of gingivitis.

Necrotizing ulcerative periodontitis (NUP) is a severe and rapidly progressive disease that demonstrates a distinctive erythema of the gingiva, soft tissue necrosis, and severe loss of periodontal attachment. NUP (previously known as acute necrotizing ulcerative gingivitis [ANUG]) can be localized or generalized. The interproximal papillae may have a punched out look, and be covered by a grayish-white membrane. Pain, bleeding, and halitosis are common features. Other symptoms include rapid onset, malaise, lymphadenopathy, loss of appetite, and occasional fever. Commonly cited etiologies for NUP include lack of oral hygiene, stress, anxiety, fatigue, lowered immune resistance, nutritional impairment, smoking, and calculus. Increased numbers of oral bacteria, such as spirochetes and fusiform bacteria are seen.

During the acute phase of NUP the most effective treatment is the use of the ultrasonic scaler. This not only allows for the removal of gross debris such as calculus but also provides a gingival lavage that helps flush the bacteria from gingival pockets. This treatment generally reduces the acute symptoms sufficiently to allow for effective subgingival scaling and root planing as necessary. Oral rinses such as Peridex® can be beneficial. Antibiotics are generally not indicated unless the patient has systemic involvement such as elevated temperature; spread of the infection into the pharynx, or lymphadenopathy. Surgery to repair gingival defects may be indicated after the infection has been resolved.

Refractory Periodontitis

The term refractory periodontitis refers to that small percentage of treated patients for whom mechanical therapy including surgery fails to stop the loss of periodontal attachment. The pathogenesis of refractory periodontitis is poorly understood and these patients demonstrate a continued lack of response to conventional periodontal therapy. A clinical diagnosis of refractory periodontitis is generally made on this distinction.

Aggressive periodontitis refers to a number of overlapping diseases of the periodontium characterized by early age of onset and aggressive nature. Included in this constellation of diseases are prepubertal periodontitis, juvenile periodontitis (localized and generalized), and rapidly progressive periodontitis (Type A and Type B). These diseases result in rapid destruction of the periodontal tissues in otherwise generally healthy individuals. The age of onset varies from very early childhood (generalized prepubertal periodontitis) to around age 35 (Type B form of rapidly progressive periodontitis). As there tends to be familial patterns with early onset periodontitis (EOP), a review of the family history of periodontal disease is useful in reaching a diagnosis. A review of radiographs for abnormal patterns of bone loss is also critical in establishing a diagnosis. A clinical

diagnosis of EOP is generally made on the basis of distribution of bone loss and age of onset.

Early referral is indicated for EOP.

Mucogingival Problems

When a tooth has a minimal zone of attached gingiva on either its facial or lingual aspect, a potential mucogingival problem exists. Frenum and/or muscle attachments in the presence of inadequate attached gingiva should be viewed as a potential cause of future recession. Rather than being a fixed number of millimeters of attached gingiva, it is a clinical judgment of the adequacy of the attached gingiva should be viewed as a potential cause of future recession. It is a clinical judgment of the adequacy of the attached gingiva on a tooth or teeth to remain stable and healthy under conditions imposed by any planned dental treatment or in the absence of dental care.

A. A simple guideline for determining whether a pure mucogingival problem exists is to record all areas with less than 2 mm of keratinized gingiva (free gingival margin to mucogingival junction) as being potential problems because they will have 1 mm or less attached gingiva when crevice depth is subtracted from the total gingiva.
B. For teeth with less than 1 mm of attached gingiva, the patient's age should be considered. A younger person will be expected to retain their teeth for a longer period. The fact that a potential mucogingival problem exists early, represents site specific susceptibility. The indications for grafting are generally greater for younger patients.

An early referral to the periodontist should be considered if there is a question of adequate attached gingiva.

If a maxillary canine or premolar has an inadequate zone of attached gingiva, the potential exists for an esthetic problem. Mandibular canines or premolars do not usually present a cosmetic concern.

When a tooth is predisposed to recession due to a lack of attached gingiva, the situation can be stable. But if restorative or orthodontic treatment could create recession, prophylactic gingival grafting should be considered. If no such treatment is planned, the patient should be informed of the potential for recession and the need for regular evaluation of the situation.

Root exposure is a frequent finding and considerable difference of opinion exists regarding the need for reparative or preventive surgical treatment within dentistry. If recession has occurred, the number of millimeters of exposure should be recorded for future reference in determining if the recession is active or stable. Where 2 mm or less of keratinized gingiva (free margin to mucogingival junction) is present, a pure mucogingival problem exists and surgical treatment should be considered.

The skill of the dentist in determining the sequence of events in a patient's dental history will usually determine the etiology. If root exposure is present, earlier records including casts and/or orthodontic models are helpful to determine if the situation is active or stable. Usually no records exist and in that case a patient's opinion can be helpful and should be considered when making a treatment decision. If the patient believes the root exposure occurred in the past and is stable, document the findings and continue to observe for change at recall, keeping in mind that future dental treatment can alter the situation. If indecision exists, but it is apparent that further recession would result in a less than satisfactory situation, grafting should be suggested. An example would be a shallow vestibule where further exposure would result in insufficient room to place a graft.

Factors that should be considered in a patient's dental history are the following:

1. Injuries may occur in sites predisposed to recession by the presence of inadequate attached gingiva. Such injuries may result from mastication, i.e., crusty bread and apples. Vigorous use of a toothbrush may result in generalized recession, but be more extensive on teeth with little attached gingiva or teeth in a prominent position with little labial buccal bone (especially canines, first premolars, and mandibular central incisors).
2. Restorative procedures such as subgingival use of rotary instruments, taking an impression subgingivally and the cementation or polishing of a restoration in the presence of inadequate attached gingiva may cause recession.
3. Periodontal surgical and non-surgical procedures may cause generalized and/or localized recession. Evaluation of past periodontal therapy should always be considered.
4. The extraction of a tooth, especially in the presence of attachment loss may be followed by localized recession on adjacent teeth.
5. Abnormally positioned frenum and/or muscle attachments especially in the presence of a narrow zone of attached gingiva may contribute to recession. Frenum and/or muscle attachments may have increased effect in the presence of a shallow vestibule.

The criteria for deciding whether to treat or refer a patient to the periodontist should be based upon the severity of the diagnosed periodontal problem and the rate of progression. Photographs along with probing depths, including attachment levels are important in establishing progression of mucogingival disorders.

The assessment of whether the problem is beyond the skill or management level of the individual dentist or dental hygienist and the extent to which

treating the patient's problems will require a multi-disciplinary approach.

Peri-implant Disorders

In implants, no periodontal ligament (PDL) is present, but rather its collagen fibers are arranged parallel to the implant collar with little to no attachment to the implant. Only a weak hemidesmosomal epithelial attachment may be present which is probably of no clinical significance. An implant is functionally ankylosed. This lack of an attachment barrier along with a minimal vascular network within the collagen fiber collar suggests that the implant may be at increased risk to trauma and infection as compared to the natural tooth. Studies comparing plaque associated lesions around teeth and implants have shown that lesions around the implants become more pronounced and occupied a larger volume of connective tissue, suggesting that soft tissue inflammation around implants may have more serious implication than the marginal inflammation around teeth. To successfully treat the peri-implant lesion, the diagnosis must be based on the etiologic cause of the disease.

When peri-implant disease is identified early referral to the oral surgeon is indicated.

Periodontal Maintenance

Supportive Periodontal Treatment (S.P.T.)

Goal of S.P.T.

The phase of periodontal therapy after control of the disease is demonstrated is supportive S.P.T. It is the phase of care intended to sustain the level of periodontal health established after active therapy. As periodontal disease is chronic in nature, S.P.T. may be a life long process. The aim of S.P.T. is to limit the progression of attachment loss, and provide a level of monitoring that will recognize the progression of disease. S.P.T. works to ensure that active therapy is resumed when appropriate.

For a patient to be considered for continued supportive periodontal therapy both the periodontal record and clinical signs must be used to establish a clinical judgment that the disease is not progressing. Recordings of attachment level show variability of 2-3 mm without a true change in attachment level. Radiographs show level of bony support, not attachment level, and 2-3 mm of change are required to demonstrate change with standard radiographic techniques.

Provider of S.P.T.

The appropriate provider of supportive treatment will vary with the:

- Aggressiveness of the initial periodontal condition
- Treatment provided for the initial periodontal condition
- Complexity of the periodontal instrumentation
- Patient compliance with home care instruction
- Presence of risk factors (heredity, smoking, diabetes, etc.)

General Dentist Recall

If the general dental office was solely involved in the initial therapy, they are responsible to set the recall interval and coordinate these visits with the need for operative recall. The expectation is that when a periodontal patient is treated in the general dental practice, the standard of care is at the same level as the periodontist. This includes record keeping and the recognition of the progression of disease.

Shared Recall

If the periodontist was involved in the initial therapy, he or she should be relied upon to recommend the initial interval and provider for recall. Appropriate operative recalls are required, and these must be coordinated with the general dentist. The caries risk protocol should be used as a guide in scheduling these visits. If operative needs do not take precedence it is appropriate that the radiographic interval is set by the periodontist. Recalls that alternate between the general dentist and the periodontist require communication for consistent care and understanding of the status of the case. Problems found at the visit, recommendations made, and plans for the next recall must be communicated not only to the patient, but to the provider for the next visit. Two years of stable periodontal condition may indicate that care can revert exclusively to the general practice, as long as the patient remains in control.

Periodontist Exclusive Recall

When supportive therapy in a general practice setting may compromise periodontal care periodontal recalls should occur only with the periodontist. This would be most likely in instances where active therapy was just completed, when there is a question about the stability of the case, or when specific unresolved local factors (such as furcation involvement), present specific challenges for recall. Operative recalls at an

appropriate interval should be scheduled at the general dental practice. Communication of the periodontal, operative, and recall status of the patient should occur between providers.

Supportive Periodontal Treatment

- Fluoride therapy in furcal areas
- Furcal caries are often unrestorable
- Open furcations are at risk for furcal caries
- The maintenance visit presents an opportunity to place topical fluoride agents in this high risk area
- Desensitization therapy
    - Root sensitivity is common in periodontal maintenance patients
    - Sensitivity can interfere with home care efforts
    - Topical agents are available that can provide limited desensitization
    - The maintenance visit provides an opportunity to place these medications when indicated (history of post therapy sensitivity)

Systemic Conditions and Medications Associated with Periodontal Disease

See section VII in the original guideline document for a discussion of systemic conditions associated with periodontal disease.

See section VIII in the original guideline document for a discussion of considerations associated with systemic conditions and medications.

Clinical Algorithm(s)

The following clinical algorithms are provided in the original guideline document:

- Chronic Periodontitis
- Plaque Related Periodontal Disease
- Plaque Related Gingivitis
- Supportive Periodontal Treatment

Scope

Disease/Condition(s)

Periodontal disease:

- Plaque-related periodontal disease
- Chronic periodontitis
- Gingivitis
- Refractory periodontitis
- Mucogingival problems
- Peri-implant disorders

Guideline Category

Diagnosis

Evaluation

Management

Treatment

Clinical Specialty

Dentistry

Intended Users

Dentists

Guideline Objective(s)

To provide the HealthPartners Dental Group dental care staff with diagnostic and treatment algorithms for the various periodontal diseases that emphasize patient and staff education, appropriate treatment modalities, and guidance for periodontal referrals resulting in better, more uniform care for this patient population

Target Population

HealthPartners Dental Group patients

Interventions and Practices Considered

Diagnosis/Evaluation

1. Periodontal assessment
    - Radiographs (bite wings, full-mouth, panographic)
    - Visual exam
    - Plaque and calculus assessment
    - Periodontal charting
2. Diagnosis of gingivitis (signs/symptoms of inflammation)
3. Diagnosis of chronic periodontal disease (signs of inflammation, pocket measurements, radiographs)
4. Classification of periodontal disease according to level of attachment loss

Treatment/Management

1. Plaque control
2. Oral hygiene instruction
3. Referral for systemic conditions (e.g., diabetes, smoking, pregnancy)
4. Adjunctive therapy
    - Antimicrobial rinses (e.g., chlorhexidine, Listerine)
    - Systemic antibiotics (metronidazole, doxycycline, amoxicillin)
    - Localized antibiotic therapy (e.g., Atridox [doxycycline hyclate gel])
5. Scaling and root planing (ultrasonic instrumentation combined with hand instrumentation)
6. Re-evaluation of response to therapy
7. Supportive periodontal treatment
    - Fluoride therapy
    - Desensitization therapy
8. Referral for periodontal surgery
9. Considerations associated with systemic conditions and medications

Major Outcomes Considered

- Effectiveness of treatment
- Need for referral
- Patient compliance

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

An online search from 2000 to 2011 was conducted using PubMed Medline and the Cochrane Database. The search was restricted to "human" and English language.

Search terms used were periodontal diseases/classifications, periodontal diseases with antibiotics, periodontal treatment and periodontal diseases with radiographs.

Number of Source Documents

150 source documents

Methods Used to Assess the Quality and Strength of the Evidence

Not stated

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review

Description of the Methods Used to Analyze the Evidence

Dentist committee members reviewed and discussed each of the articles used to update the guideline.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Dentist committee members reviewed and discussed each of the articles used to update the guideline.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

The existing guideline was updated in a draft format and circulated to HealthPartners dentists and dental hygienists for review and comment. Drafts were also sent to two outside experts in the field of periodontology for review and comment.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate diagnosis and treatment of periodontal diseases

Potential Harms

Chlorhexidine is staining and may alter taste sensation. Listerine® does not have the degree of effectiveness that is shown by chlorhexidine, but also does not stain as much, or alter taste sensation.

Contraindications

Contraindications

Chronic illness may contraindicate therapy for chronic periodontitis.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Audit Criteria/Indicators

Clinical Algorithm

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

HealthPartners Dental Group and Clinics guidelines for the diagnosis and treatment of periodontal diseases. Minneapolis (MN): HealthPartners Dental Group; 2011 Dec 9. 37 p. [51 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2006 Mar (revised 2011 Dec 9)

Guideline Developer(s)

HealthPartners Dental Group - Professional Association

Source(s) of Funding

HealthPartners Dental Group

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

Not stated

Financial Disclosures/Conflicts of Interest

Not stated

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: HealthPartners Dental Group and Clinics guidelines for the diagnosis and treatment of periodontal diseases. Minneapolis (MN): HealthPartners; 2006 Mar 9. 85 p.

Guideline Availability

Electronic copies: None available

Print copies: Available from HealthPartners, 8170 33rd Avenue South, P.O. Box 1309, Minneapolis, MN 55440-1309; Phone: (952) 883-5151; Web site: http://www.healthpartners.com

Availability of Companion Documents

A list of potential measures is available in the original guideline document.

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on August 7, 2007. The information was verified by the guideline developer on August 28, 2007. This summary was updated by ECRI Institute on July 28, 2008 following the U.S. Food and Drug Administration advisory on fluoroquinolone antimicrobial drugs. This NGC summary was updated by ECRI Institute on February 27, 2012. The updated information was verified by the guideline developer on March 21, 2012. This summary was updated by ECRI Institute on September 18, 2015 following the U.S. Food and Drug Administration advisory on non-aspirin nonsteroidal anti-inflammatory drugs (NSAIDs).

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